Central Pacific Transcontinental Railroad, Tunnel 24
Southern Pacific Donner Pass Route Tunnels
Milepost 132.9
Applegate vicinity
Placer County
California

HAER No. CA-200

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Western Region
Department of the Interior
San Francisco, CA 94107

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HISTORIC AMERICAN ENGINEERING RECORD

CENTRAL PACIFIC TRANSCONTINENTAL RAILROAD, TUNNEL 24
HAER No. CA-200

Location: Southern Pacific Donner Pass Route Tunnels
Milepost 132.9, Applegate vicinity, Placer County, California

UTM: 10-673390-4316740
Quad: Greenwood, Calif. 7.5', 1949 (photorevised 1973)
(west portal)

UTM: 10-673430-4316835
Quad:, Greenwood, Calif. 7.5' 1949 (photorevised 1973)
(east portal)

Date of Construction: 1910.

Engineer: Southern Pacific Railroad Engineering Department.

Present Owner: Union Pacific Railroad, 1416 Dodge Street, Omaha NE 68101.

Present Use: Railroad Tunnel.

Significance: The Central Pacific First Transcontinental Railroad is a segment of the western half of the first transcontinental railroad, built from Sacramento, California to Promontory Summit, Utah between 1863 and 1869, where it joined the Union Pacific Railroad which had built west from Omaha. For the purpose of the current project, the first transcontinental railroad was found likely to be eligible for the National Register of Historic Places at the national level of significance under Criterion A for its significance in transportation history, in uniting the East and the West, and in the development of the West. The railroad's period of significance is 1869 to 1945, from the line's completion in 1869, through the years of its role in the settlement and development of the West, to the conclusion of the railroad's achievements in World War II. Tunnel 24 is a contributive element of this property.

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I. DESCRIPTION

Tunnel 24 is a 292-foot, single track railroad tunnel, with granite ashlar portal faces and wingwalls. As-built, the tunnel was concrete-lined for the first fifty feet in from each portal, with the remainder lined in redwood timber; the railroad has subsequently covered the timbering with shotcrete. The tunnel is on a three degree, fifty-two minute right-hand curve, and carries the tracks of the Union Pacific Railroad's (formerly Southern Pacific) Donner Pass line.

II. HISTORICAL INFORMATION

Contractors, Utah Construction Company of Ogden built Tunnel 24 (originally numbered Tunnel 10) in 1909 as an element of the reconstruction and double-tracking of the original Central Pacific line between Rocklin and Colfax. [For a full history of this line and of this undertaking, see the documentation set for the Central Pacific Transcontinental Railroad (Southern Pacific Overland Route) (Southern Pacific Donner Pass Route), Southern Pacific Donner Pass Route Tunnels, HAER No. CA-196.] After assuming control of the Southern Pacific/Central Pacific and merging them with the Union Pacific in 1901, Edward H. Harriman had embarked on a series of huge reconstruction projects system-wide. One of these was the double-tracking of the original Central Pacific line over Donner Pass, the first segment of which was from Rocklin to Colfax. In connection with this, Harriman also moved the roundhouse and locomotive shop facilities originally built at Rocklin by the Central Pacific, to nearby Roseville where he built a much larger and more modern facility to handle the larger locomotives he was bringing onto the system.

Two contracting firms divided the work, with Utah Construction Company building the portion from Colfax west to Clipper Gap, and Erickson & Petterson handling the work from Rocklin east to Clipper Gap. All the tunnels, whether single- or double-track, conformed to Southern Pacific Common Standard plans.

Utah Construction Company built their tunnels by driving two drifts (small pilot tunnels) at the spring line of the final arch. They then drove a third drift at grade level and centered, roofing it with loose timbers. Workers then blasted the "bench", the material between the floor of the upper drifts and the ceiling of the lower drift, then removed some of the lower drift's roof timbers to drop the loose material down into dump cars for removal. At Tunnel 24, limestone geology slowed construction to forty-five feet per month, with workers driving the bore from one end only; they completed their work in 1910.

III. SOURCES

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United States Geological Survey. Topographic map. Greenwood, Calif. quadrangle, 7.5' series, 1949 (photorevised 1973).

IV. PROJECT INFORMATION

As a result of the 1996 merger of the Union Pacific and Southern Pacific Railroads, a federal undertaking under the jurisdiction of the Surface Transportation Board of the U.S. Department of

Transportation, and in order to accommodate freight trains utilizing longer and taller cars and loads--tri-level auto rack cars and cars carrying double-stacked containers, the Union Pacific will need to increase tunnel clearances on the former Southern Pacific Donner Pass Route. Tunnel 24 currently will clear neither type of car. The tunnels, built between 1868 and 1925, are contributing elements of the National Register-eligible Southern Pacific Donner Pass Route Tunnels Historic District. All tunnels have been laser-measured and the railroad will determine clearance needs on a tunnel-by-tunnel basis. Some, because of curved alignment, will require interior work to allow for longer cars such as tri-level auto rack cars; others will require both interior and portal work to provide sufficient vertical clearance for "double-stack" container cars. The latter work may impact the character-defining tunnel portals if crown mining of the tunnels (as opposed to lowering the tunnel floors) is selected. Inasmuch as this would cause an adverse effect to the tunnels, Union Pacific has elected to record the tunnels for the Historic American Engineering Record. Documentation was carried out by P.S. Preservation Services, John Snyder Field Director and Historian, and Ed Andersen, Photographer. Photos were made in August 1997, and research was carried out from August 1997 through March 1998.